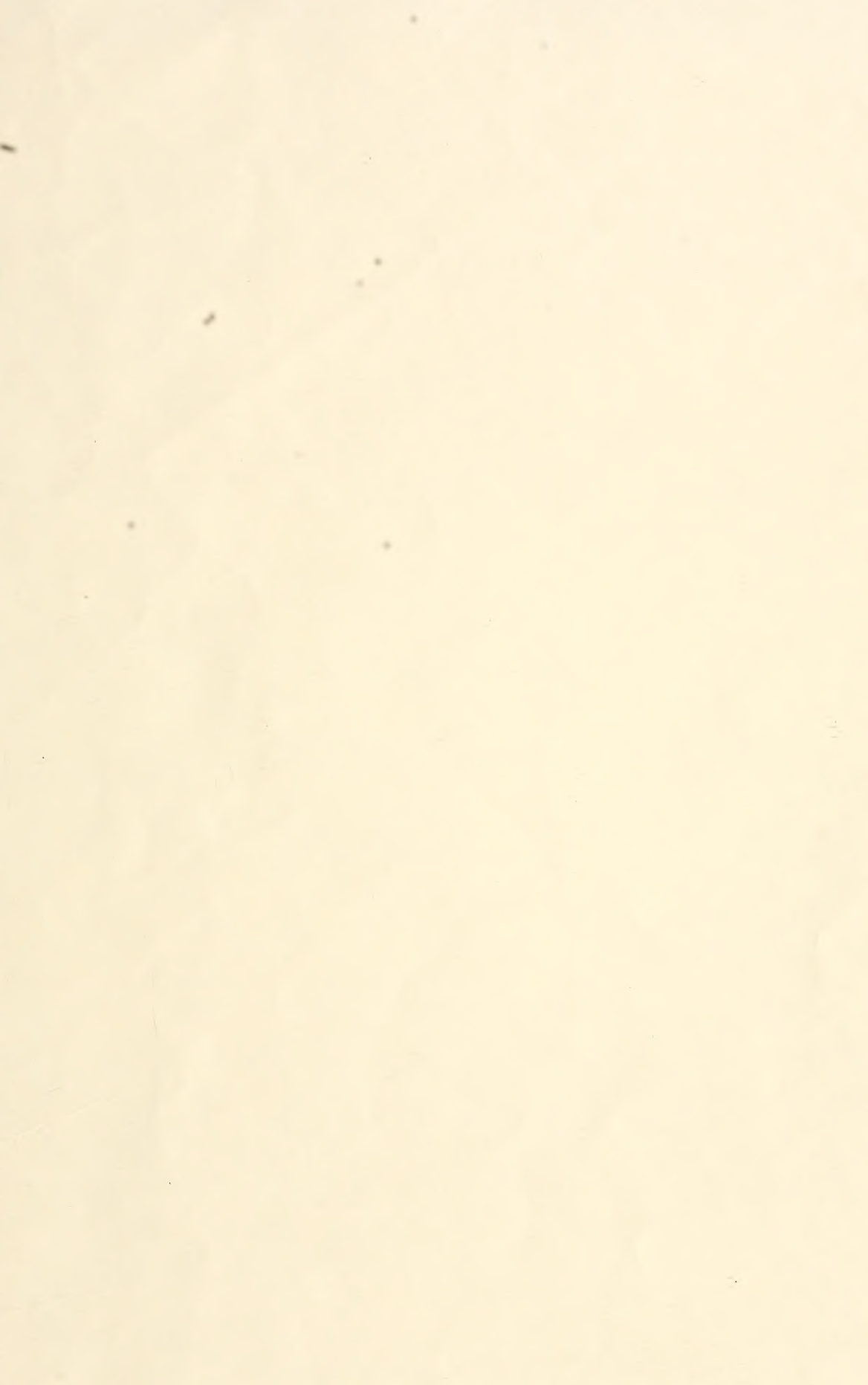




The beautiful is as useful as the useful. —Victor Hugo.

Division of Birds

BIRDS AND NATURE

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BIRDS AND NATURE.

ILLUSTRATED BY COLOR PHOTOGRAPHY.

VOL. XIV.

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No. 5

THE LOST NOTES.

Midst glacial mists,
Across the shroud of amethysts
And emeralds sown to dust;
Across the stain and rust
Of footsteps centuries have trod;
Across the new, sweet sod
Of yesterday, and all fair things
Sweeps ever, as the free world swings
Upon her way, a rapture song
Of nature, sweet and strong,
Sways on from shore to shore, from sea to sea,
Now lost, now found across immensity,
But never hushed. The whirl of wings;
The drowsy hum amidst the rings
Of clover in the grass;
The clarion tone across the mountain-pass;
The song above some nest; the morning cry
When day but breaks; the song which drifteth by
At noontide or at night;
The vesper-voice when light
But dies; the lullaby
Where mothers sing and sigh;
The reeds bent low to sing across the brook;
The triumph-song shook
From the heart of forests that survive; the breath of leaves
Bound round in garlands near the eaves;
The rhapsodies of seas,
The fantasies of avalanche—all these
Intone the rapture-song of nature, yet we miss
The martyred song-bird's sweet, lost notes of bliss.

—GEORGE KLINGLE.

THE TREE SWALLOW.

(*Tachycineta bicolor.*)

Along the surface of the winding stream,
Pursuing every turn, gay swallows skim,
Or round borders of the spacious lawn
Fly in repeated circles, rising o'er
Hillock and fence with motion serpentine,
Easy and light. One snatches from the ground
A downy feather, and then upward springs,
Followed by others, but oft drops it soon,
In playful mood, or from too slight a hold,
When all at once dash at the falling prize.

CARLOS WILCOX, "The Age of Benevolence."

The Tree Swallow is not only a beautiful bird, but also a useful sailor of the air, capturing many insects that are detrimental to the agricultural interests of man. Its usefulness is greatly enhanced by a wide range. It is a bird of North America; from the Atlantic to the Pacific Oceans and from the fur countries of the North to the Gulf of Mexico it flies and sails over land and streams in search of food. It is the earliest of the swallows to appear in its northern breeding grounds and the latest to retreat as the season of cold weather approaches. In fact, it seems loath to migrate at all and only flies southward to localities where the climate is such that it can obtain a supply of its insect food. Though some individuals pass the winter in Mexico and Central America, the majority probably remain during that season within the boundaries of the United States.

The Tree Swallow nests practically throughout its range excepting in the southernmost portion. Unlike some of its sister species, this Swallow has not as yet entirely abandoned the nesting habits of its ancestors, but is passing through a change in its choice of home building sites. This is especially true in the East, where the Tree Swallow frequently accepts the hospitality offered by man and rears its young in a bird house, or in a building into which it may enter through some inviting open-

ing in the gable or under the eaves. Its wilder habits still lead it, as a rule, to seek the seclusion of wooded areas near water courses where the trees have been killed by frequent floods. Here, in natural holes caused by decay, or those excavated and abandoned by woodpeckers, the Tree Swallow builds its nest of grasses and straw and lines it with a thick layer of feathers. On this soft bed its young are raised in safety and in the quiet that this bird seems to love so well for its domestic life.

Dr. Robert Ridgway has well described the natural habits of this restless and interesting bird, which is also most appropriately named the White-bellied Swallow, in the following words: "The White-bellied Swallow is an abundant species where there are suitable places for the location of its nests. Some years ago there were many large dead stumps standing in the water in a stagnant pond connected with the Wabash River immediately above the dam at the Grand Rapids, near Mount Carmel, Illinois. This pond consisted of 'back water' resulting from the building of the dam, and the dead stumps were presumably the remnants of trees that had been killed by flooding, since they grew so thickly as to leave no doubt of their having once formed part of the adjacent forest. These dead stumps and snags were perforated by countless woodpecker holes, and in these the White-bellied Swallows had



FROM COL. CHI. ACAD. SCIENCES.

TREE SWALLOW.
(*Tachycineta bicolor*).
Life-size.

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their nests, as did also many pairs of Carolina chickadees and prothonotary warblers."

The flight of the Tree Swallow is marvelous and wonderfully beautiful. It flies more in circles than do the other swallows, especially at the approach of night, when the flight is much lower than it is earlier in the day. Its flight does not seem to have the velocity of that of the barn swallow nor of the chimney swift, yet it is graceful and suggests the great endurance of the bird. "They skim above the water, hour after hour, frequently uttering a faint squeak, which doubtless expresses their gratification at the capture of a choice morsel, or their disappointment at a failure." Upward or downward, forward and turning, skimming over the water or sailing in curves, its flight is so easy that we may, with Alice Cary, call this little bird a swimmer of the air.

This Swallow, which is easily distinguished from its sister species by the shining greenish black color of its back and the pure white color of the plumage underneath, is very useful in the economy of man. Its food consists almost entirely of insects which it catches most dexterously while on the wing. The large gape of its mouth perfectly adapts it to this method of collecting food. When the insect is caught, and it seldom fails,

the bill is closed with a snap that would seem to indicate exultation over the capture. While many of the insects upon which the Tree Swallow feeds—such as the Hessian fly, the wheat-midge and weevils—are very destructive to vegetation, it has also been shown that it devours a large number of the smaller dragon-flies, insects that are predaceous and are very abundant in grain fields and meadows. It would seem, however, that its destruction of the harmful insects would overbalance the number of useful species that it destroys. In the fall it feeds quite largely upon wild berries.

Mr. Langille writes eloquently of the habits of the Tree Swallow. He says: "Behold it 'skating on the air.' How it dashes along, seemingly almost without exertion, capturing its food or dipping its bill into the glistening stream to drink or washing itself 'by a sudden plunge,' all of which scarcely retards its onward movement. In a moment it is out of sight, or else, rising nearly perpendicularly, it will suddenly shoot across the tree tops with almost lightning speed, performing the most wondrous aerial evolutions as easily as if it were tossed by the winds themselves. The whole domain of the air is the Swallow's home. No path of insect is beyond its reach, and what bird of prey can overtake it? Here is freedom indeed and a life that is one continual recreation."

THE OLD YELLOW HEN.

"I'll have you arrested for cruelty to animals!" cried Margaret, laughingly.

"Not if you want to be invited to camp to eat a chicken dinner," was the reply.

"I don't; when I come I expect to be regaled with bass and pickerel, else what is the use of a fisherman cousin?" she returned.

"You shan't come at all if you make such dreadful threats," he retorted, lifting the reins.

As the loaded camp-wagon jolted out

of the yard there might have been seen, as the story-tellers say, the heroine of this tale, the yellow hen, packed snugly into the end of a length of stovepipe, her head bobbing back and forth as she peered anxiously at the changing prospect. Up the hills creaked the heavy vehicle, the campers beguiling the way with plans for their weeks of freedom in the woods; whatever the feelings of the helpless passenger, thus ruthlessly torn from her home and companions, she made no sign.

After a two hours' climb a glimpse was caught of a lake, one of two lying side by side, called "The Spectacles." Presently the wagon passed through a barway into an open field; crossed it among rocks, sweet fern and berry bushes, to a track cut through the woods. This shortly led them to a grove by the side of the lake, where stood a small board cottage, their summer home. It was already open, and they were greeted with shouts which turned to laughter as the captive traveler was discovered.

"It is too bad!" said the Mother of the Family.

"Pshaw!" replied the Fisherman. "It didn't hurt her a bit, and there really wasn't room to pack her any other way, and you told me to be sure to bring her for Sunday's dinner. Watch her now and see how much she is injured!"

The yellow hen, released from captivity, shook her feathers, deliberately took an observation of the locality, turned about and began to pick up grasshoppers. She was promptly shut in a coop, extemporized from a barrel, and it was supposed her days were numbered.

Sunday arrived, but the Fisherman had been so successful that on the family dinner table a big bass usurped the place of the yellow hen.

"If we are going to keep that chicken another week," announced the Fisherman's wife, "I'm going to let her out of the coop. I believe she will stay around."

So the yellow hen was released, and, being of a philosophical nature, proceeded to make herself quite at home. She not only "stayed around," but rendered her presence agreeable by clucking cheerfully to herself. She chased bugs all day long,

quite disdainful the corn that was thrown to her, and at night went to roost on the limb of a tree near the cottage. In that lonely place, where the nearest camp was at some distance and must be reached by water, the companionship of even a yellow hen with a contented disposition was not to be despised.

"I declare," said the Man of the House on Friday, "seems most a pity to kill that hen, she's having such a good time."

The family assented, but this week the Fisherman reported a scarcity of bass and pickerel, and the Fisherman's wife deplored a lack of variety in the larder, so there seemed no hope of a reprieve.

Saturday morning there was a vigorous cackling in the vicinity of the yellow hen's barrel, and a search instituted in that direction discovered a big, warm white egg in the coop. A conclave was promptly called; an excuse had been found, and the verdict was unanimous; it would surely be a pity to kill the hen that would daily supply them with a new laid egg. As long as she continued to pay her board her life should be spared.

All the remaining days in camp the yellow hen thrived, and when the campers returned home she rode in state in the barrel, for by that time she was considered quite one of the family.

Several years have passed, but the old yellow hen still survives, much respected, and the ornament of the chicken yard. She is far too tough for food, and greatly in demand as the careful mother of large families of chickens, none of whom, however, have succeeded in rivaling her in the esteem of her friends.

The moral of this true tale is that contentment is the best policy.

ELIZABETH MILES DERRICKSON.





ROAD-RUNNER.
(*Geococcyx californianus*).
1/2 life-size.

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FROM COL. CHI. ACAD. SCIENCES.

THE ROAD RUNNER.

(*Geococcyx californianus*.)

The range of the Road-runner is very restricted and includes the southwestern United States from Texas to the Pacific Ocean. It is also a native of the larger part of Mexico, and it is found as far northward as southern Utah. It is practically a resident of all but the northern portion of its range.

This peculiar bird has several common names, all more or less suggestive of its habits. Some of the more striking of these common names are the Ground Cuckoo, the Chaparral Cock, the Lizard Bird and the Snake-killer. The name Road-runner was given this bird because of its terrestrial habits and the rapidity with which it moves over the ground, where it spends much of its life searching for its food. This consists of insects, snakes, lizards, snails, worms and even small rodents and young birds. It destroys vast numbers of grasshoppers and beetles, and one observer states that he found in the stomach of one a garter snake that was fully twenty inches long.

Major Charles Bendire has given the following excellent account of his observations of the habits of this species: "Road-runners are ordinarily rather shy and suspicious birds, and not as often seen as one would think, even where comparatively common. Within the United States they are most abundant along the southern borders of Texas and Arizona, and in southern California. Notwithstanding their natural shyness, they are inquisitive birds, and where they are not constantly chased and molested will soon become used to man. One of these birds paid frequent visits to my camp, often perching on a mesquite stump for half an hour at a time within twenty yards of my tent. While so perched it would usually keep up a continuous cooing, not unlike that of the mourning dove, varied now and then by

a cackle resembling that of a domestic hen when calling her brood's attention to some choice morsel of food. This call sounded like 'dack, dack, dack,' a number of times repeated. Another peculiar sound was sometimes produced by snapping its mandibles rapidly together. While uttering these notes its long tail was almost constantly in motion and partly expanded, and its short wings slightly drooped. In walking about at ease the tail is somewhat raised and the neck partly contracted. When suddenly alarmed the feathers of the body are compressed and it trusts almost entirely to its legs for escape, running surprisingly fast. While running it can readily keep out of the way of a horse on a fair gallop on comparatively open ground, and should the pursuer gain too much on the bird it suddenly doubles on its course and takes advantage of any thickets or broken ground in the vicinity, and is soon lost to sight. Its flight is apparently easy, and, considering its short wings, is rather swift."

The fleetness of the Road-runner is shown by the statement of an eye-witness, who, when in southern California, saw one of these birds chased by ranchmen for a distance of a mile or more at a high speed, when the bird, though still in advance, quickly stopped and flew to the branches of a low tree, apparently in an exhausted condition. Though related to the cuckoos, it resembles the pheasants because of its terrestrial habits.

The Road-runner usually nests in rather low trees or bushes and occasionally in the hollow of a dead stump. The nest is usually placed where it is well concealed from view, and it has been known to appropriate the nests of other birds. The body of the nest is usually constructed with small sticks or twigs and lined with finer twigs and dry

grasses. The lining may also consist of dung, feathers, bark fiber, fragments of snake skins and other fine materials that may be found in the vicinity. Sometimes the lining is entirely absent and the eggs are laid on the foundation of sticks.

"The parents are devoted to their young, and when incubation is well ad-

vanced the bird will sometimes allow itself to be caught on the nest rather than abandon its eggs. The nestlings, when disturbed, make a clicking noise with their bills. When taken young, they are readily tamed, soon becoming attached to their captor, showing a great deal of sagacity and making amusing and interesting pets."

THE WHITE-THROATED SPARROW.

A weary, weary wilderness!

What friend is this that hovers near?

"I—I—I—, pea-bod-dy, pea-bod-dy,"

My pulses quicken as I hear.

Some friend long lost but ne'er forgot

Seeks thus to win me with his plea

And, following to the wilderness,

Speaks in the song that comes to me.

O little pearl-voiced bird! one note

Reveals thee, tells me whom thou art,

Voicing the while with quivering throat,

The triple beat of Nature's heart!

Like love's thy notes are softy keyed

With pain—sweetest beside a cross—

As if a sorrowing angel stayed

Its steps to tell us of its loss.

A twig goes trembling as the bird

Forsakes the bough and flutters down—

I see the gilding on thy wings,

The snow that lies upon thy crown!

Then count the wilderness's pulse

In thrice-repeated rhymic note,

I bless thee for thy constancy

O minstrel with the pure white throat!

Or, if I gain the mountain height

Where fir and rock are scattered free,

Still true he wooes me with his song,

In breezy triplets calls to me.

O weird, wild melody! a strain

Whose wondrous sweetness none can tell!

Three tears that dropped from Nature's eyes

Thrilling life's harpstrings as they fell.

—NELLY HART WOODWORTH.

BIRD NOTES.

About a year ago I observed a blue jay in a neighboring yard and thought how nice it would be if we could secure him and his mate for daily visitors through the dreary winter. So arming myself with a plentiful supply of crumbs I crossed the road and under the tree where I first saw him I scattered a few crumbs and as I retraced my steps I scattered a few more, and when I reached the window boxes of my own home I covered two of these with the remaining crumbs, as tempting a feast as any bird could wish. The very next morning he came, very shy indeed at first, just alighting for a morsel and then away to a neighboring tree to devour it more leisurely. The next day another came and soon another and another, till in less than a fortnight I had ten of those feathered beauties daily visitors to my windows. Then began in earnest my study of the blue jay. I had always been his friend and could not believe many of the scandalous stories told of him. First I studied his diet. I found he cared but little for corn and oats, but pieces of toasted bread, bits of fat were his especial dainties. One day I put on the boxes the scraps from leaf lard, also some bits of toast. I saw two that morning take a piece of bread, thrust it into the fat until thoroughly besmeared and then fly away. They did this several times. My ten blue jays would, in the course of a few hours, carry away a two-quart measure of scraps of a suitable size. They were also fond of the trimmings of steak, but cared little for lean meat. They came for their daily meal about eight in the morning, and though they took occasional lunches through the day, they never called for food except in the morning. If their call of "Jay, Jay" did not bring their food as promptly as they wished, some of the bolder ones would peck with their bills on the window panes.

One pleasant day I noticed my flock in some trees near the house. Some of them were preening their feathers;

others were hopping from branch to branch and others were busy picking something from the trees. I determined to find out what they were doing and so on examining the tree on which the birds were at work I found little clusters of eggs—caterpillar eggs they proved to be. One great point for my bluebird friend! The birds were not nearly as pugnacious toward the English sparrows or toward each other as are other little pests.

Soon after the middle of February I noticed different notes in the call of one, and I found, too, when he uttered these he would move up and down upon the branch where he rested. It seemed as if the rising and falling helped him in the utterance. It seemed to be a call peculiar to himself and not one he made to mimic another bird.

My flock was very slender and graceful, but before winter was gone many had grown quite portly and assumed a kind of dignity befitting their obesity. As the warm days of April came they returned less and less frequently, and at last we thought our winter friends had flown. Toward the last of the month, one cold bleak day I looked out and the ten beauties were scattered among the branches of the trees, and such a noisy time they had, but discordant as it was, we all enjoyed their farewell visit.

It has been said that the jay lays her eggs in the nests of other birds. I do not think this true, for two bird lovers in my vicinity have seen blue jays' nests. It is not a very elegant affair, but serves its purpose very well.

That he devours young birds, statistics show that among two hundred and eighty stomachs examined only three showed traces of eggs and two of young birds, and it has been shown that he destroys many noxious insects, moths and their cocoons, especially of one that is injurious to grapes.

BERTIE M. PHILLIPS.

THE ORANGE-CROWNED WARBLER.

(*Helminthophila celata.*)

To those people who reside in the temperate regions of the United States it is a very disappointing law of Nature that takes many of our beautiful and sweet tempered little birds into the far North for the purpose of raising their young. As a result of this natural law it is very difficult for students of bird-life to become acquainted with many of the warblers. Their habits and the characteristics of color and voice must be studied during the periods of northern and southern migrations. The study is rendered more difficult, as they remain but a few hours or a few days at the longest while they are en route. Also, while hurrying along on their journey, they frequent only the foliage of bush and tree, where, hidden from the gaze of the observer, they hunt during the day for their insect food. "Absent to-day, present to-morrow, the warblers come and go under cover of the night, and we may give a lifetime to their study and then know we have not mastered the laws which govern their movements." They are "at once the delight and the despair of field student." Visiting the woods some bright morning in May one may find the trees alive with the busy little warblers. Probably there will be several species; some of them but few in number and rare, while other species will be more numerous in individuals. Here they will spend the day hunting in a happy go-lucky manner, and, though difficult to be seen, they will be betrayed by the simple note which pervades the woods. Dr. Ridgway has said: "No group of birds more deserves the epithet of 'pretty' than the warblers; tanagers are splendid; humming-birds are refulgent; other kinds are brilliant, gaudy or magnificent, but warblers alone are pretty in the proper and full sense of that term."

The Orange-crowned Warbler is one of those warblers which is quite erratic in its appearance in any given locality during its migrations; some seasons it

may be common and in other seasons its presence may not be noted at all. It breeds in the interior of British America, in the Rocky Mountain regions and as far northward as the Yukon district of Alaska. In its migrations it passes through the Mississippi Valley, being very rare in those states bordering the Atlantic Ocean north of Virginia. It winters in the South Atlantic and Gulf States and in Mexico, and is a common species in Florida during this season.

This little Warbler is constantly in motion during the daylight hours in the foliage of the higher tree branches. Seemingly to satisfy its tireless energy, it frequently stops its hunt for insects to utter its simple song. Mr. Ernest Thompson, in his "Birds of Manitoba," describes this song as sounding like chip-e, chip-e, chip-e, chip-e, chip-e, and says: "Its song is much like that of the chipping sparrow, but more musical and in a higher key." To Dr. Wheaton its refrain is a "loud, emphatic and rather monotonous song, resembling, as nearly as he can describe, the syllables, chicky-tick-tick-tick-tick; this song was louder and more decidedly emphasized than that of any member of the genus with which he was acquainted." Colonel Goss hears in the song "a few sweet trills uttered in a spirited manner and abruptly ending in a rising scale."

Its nest is usually built on the ground in clumps of bushes and quite hidden by dried leaves. The nest is large for the size of the bird, and is constructed with plant stems, strips of fibrous bark and dry grasses loosely woven together. Not infrequently also leaves are used in the construction of this outer wall. That the little birds may have a soft bed upon which to lie the nest is well lined with fur and feathers where the

"Blind nestlings, unafraid,
Stretch up wide-mouthed to every shade
By which their downy dream is stirred,
Taking it for the mother bird."



FROM COL. CHL. ACAD. SCIENCES.

ORANGE-CROWNED WARBLER
(*Helminthophila celata*).
Life-size.

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CHRISTMAS WITH THE BIRDS.

It was Christmas week, and Teddy was sick. Teddy was a little brown-eyed, fair-haired girl, christened Theodora May, and the only reason she ever became Teddy was because she had two brothers who went to the high school part of the time, and who during the other part climbed trees, and made engines, and rode their ponies at a furious gait.

It couldn't be expected that two rollicking boys like these could bring their minds to say "Theodora" in a dignified and proper manner, or even "Theo," as Mamma and every one else did. So they called her "Teddy" on the start and the name clung to her ever afterward.

As for the sickness, Teddy was just getting over the measles, and on Christmas week, too! No wonder Teddy was rather doleful, though she tried so hard to be brave. Mamma was just as good as she knew how to be, and read to her stories and brought out all sorts of wonderful things to amuse her.

The Christmas tree which her brothers, Harry and Fred, had decorated for her with such pains, no longer charmed. Although the boys sometimes teased their little sister when she was well, they were as gentle as could be when she was sick, and had expended a great deal of time upon the arrangement of a tree in the little alcove off her room. But it was now the day before New Year's and the tree began to have a worn out appearance such as trees have a way of acquiring after several days have passed. The red tin soldier which graced the topmost bough had lopped over in a forlorn manner and his musket which stood up over his shoulder in a very soldierly style now pointed out of the front window.

"I wish I was a bird instead of a little girl," sighed Teddy as a little chickadee hopped along on the roof of the veranda

under the window. "Then I wouldn't have to go to school, and practice on the piano, and—have measles," she added, as if this were the culmination of all troubles.

"No," added Mamma, "nor have three large dolls for Christmas, or a box of paints, or a Christmas tree, or perhaps any Christmas dinner unless you flew around and found it for yourself."

"Why couldn't we have a Christmas dinner for the birds?" said Teddy, brightening at a sudden thought. "We can have it right out here on the roof of the veranda and invite all the birds in the neighborhood," and she clapped her hands as the plan developed in her mind.

"I think it would be an excellent idea," said Mamma, glad of something to interest her during the remaining day or two of her imprisonment. "You could send the invitation out this afternoon, and make your preparations tomorrow, and have the dinner the next day."

"But it is so long after Christmas," sighed Teddy. "Won't the birds know the difference?"

"Not at all," said Mamma; "in fact, I think it will be all the better, for if I am not surprised we shall have some more snow tonight and they will find it more difficult to find their own dinner, and will be all the more anxious to accept your invitation."

"What shall I do first?" said Teddy, who suddenly became so well one wouldn't know she had ever been sick.

"Write the invitation," replied Mamma, "and it must be done very carefully and written very plainly so they will have no trouble in reading it."

Of course so serious a matter as this required a great deal of time. It was written and rewritten and blotted and copied over so many times that Teddy was quite tired out and glad to be snug-

gled in bed when it was done. But the result couldn't have been improved. It read something like this:

"Miss Theodora May Brent invites all the birds of Oak Lawn to the birds' Christmas dinner Friday, January 2—from daylight until dark—N. R. I. R."

Harry and Fred were very wise and were familiar with all kinds of abbreviations, but to Teddy's surprise had to have it explained to them that N. R. I. R. meant "No Reply Is Required."

When she opened her eyes the next morning her first thought was about her Christmas feast for the birds and it helped her wonderfully through the process of dressing. There was much eager planning and finally Mamma suggested that the abandoned Christmas tree would make an excellent dining table. She would lay the matter before Harry and Fred, and they would have plenty of time to help her. They would strip the tree of its present adornments and arrange it for the birds—for of course birds couldn't be expected to care for tin soldiers, wax candles, or bright colored balls.

"But we haven't sent out the invitation yet. I think that ought to be attended to first," exclaimed Teddy, and while she was eating her breakfast she thought of a most glorious plan. She took her stuffed robin and tied the invitation around his neck with red ribbons. "Now, if we could put him out on the veranda all the birds would see him and not be afraid, and when they came up to make friends they couldn't help but read the invitation," for she had carefully left it unfolded so no bird, however stupid, could fail to see it.

Fred joined heartily in this plan and securing a ladder, he carried the bird out and fastened it in a conspicuous place on the veranda roof.

All that day Teddy was obliged to make numerous trips to the window to see how her plan was succeeding and was pleased to see many birds stop for a short call and a sun bath on the roof and quizzically eye cock-robin, and one even pecked at the ribbons which held the paper. They chirped so unusually loud that Teddy was sure they understood, and one little fellow actually turned to the window and sang a little song. He had noticed the letters N. R. I. R. and his

song said as plain as day, "I thank you for your invitation, Mistress Teddy, and will be very much pleased to come."

Teddy had learned many little arts while in the Kindergarten, so her nimble fingers worked busily all that day making little cardboard boxes and braided baskets which would hold seeds and various kinds of crumbs which Susan, the cook, had agreed to furnish. She had to stop and rest several times but by night everything was finished.

Fred and Harry assisted her in putting them on the tree and when the task was completed Teddy lay back in the big chair with a sigh of relief.

"It looks bare now the strings of popcorn are all off," she said after viewing it with a critical eye, "but I am so tired I can't think of another thing," and her head fell wearily on the arm of the chair.

"I know some little winter elves who will help us decorate the tree," said Mamma as she prepared Teddy for her little white bed, and fed her spoonfuls of bread and milk. "You just whisk into bed and I'll promise that they will work all night," and Teddy was too sleepy to inquire further but fell asleep dreaming of birds and winter fairies and Christmas trees.

"Where are the winter elves, Mamma?" were the first words Teddy said the next morning, "and how are they different from summer elves?"

For reply Mamma raised the shade and there stood the little tree fastened securely to the veranda roof and every bough decorated more beautifully than could be done by human hands with soft feathery flakes of snow. "Oh! how lovely," cried Teddy. "How natural that will seem to the birds."

Then the boys clambered on to the roof and, with Teddy behind the window to give orders, filled every box and basket with seeds and crumbs of bread and cakes until they couldn't be trusted to hold any more.

It had to be done very carefully so as not to dislodge the snow, but finally it was accomplished.

Then Susan brought a half dozen bones with a liberal supply of meat left on, which she had saved for the purpose,

and which some of the birds like best of all.

Then cock-robin was fastened securely to a limb. "For he can be butler," Teddy said, "and make it seem nice and 'homey' to all the birds."

By eight o'clock everything was in readiness. Cock-robin sat sedately on the top bough where the red tin soldier had stood so long, and if the winter birds wondered why he hadn't gone South long before with his mates they were too polite to say so.

The ground was now covered with several feet of snow, and, as Mamma had said, it made seed hunting quite difficult. So many of the birds which usually kept in the fields were forced to go nearer dwellings in hopes of finding a dinner. Besides, the English sparrows, who are such gossips, had told the story of the invitation far and wide, so cock-robin had many callers that day. He never once forgot dignity and stood up stiff and prim, an excellent quality in a butler. He only bowed when the wind blew.

Of course the English sparrows came first of all, and would have eaten up everything if Fred and Harry, who had secured a point of vantage in a neighboring tree, hadn't frightened them so thoroughly with an air gun that they flew away into a park nearby to talk it over and try to decide what it all meant. Here their attention was distracted by other things and they forgot to return until nearly dark.

The first real polite callers were two juncos dressed in suits of gray with low cut vests of white. They pecked timidly in the baskets; then, alarmed at their own boldness, flew away; but, gaining courage after a time, returned and had a great feast. When they left they shook hands with cock-robin and thanked him for his entertainment. Fortunately it was just time for cock-robin to give a bow. Perhaps you think they didn't shake hands, but they shook hands the way

birds do, which is a good and sensible way, no doubt.

The tree sparrows who came next made a great chatter. They all wore a little black breast-pin right on their white shirt fronts and stayed and talked a long time. "Too-la-it," "Too-la-it," they said, which Teddy behind the muslin curtain interpreted as a series of compliments upon the entertainment and cookery.

The chickadees wore black hats and neckties, and said "chickadee, chickadee," so that Teddy knew them at once. They did this instead of leaving a card, as some polite people do at receptions. But the finest dressed caller came last of all, just as they do at real receptions, and I am glad of this, for if he had come earlier he might have made the plainer dressed birds feel uncomfortable.

He wore a suit of rosy red throughout, except a black cravat at the throat, and he did one thing which I am sure you can't approve any more than Teddy did. He let his wife come in an olive green gown, and she looked really quite plain beside her husband. The name of this fine bird was the cardinal, but he did not keep telling it, as did the chickadees. He knew he was so handsome that Teddy would be sure to find out who he was. He occasionally said "tsip," "tsip," which Teddy interpreted to her own satisfaction.

If Teddy had lived in some other place besides Illinois she might have had different guests at her Christmas dinner.

When nearly dark the English sparrows came back, and finished the feast to the last crumb, so Teddy didn't have any work the next day to clear the table. When they had all finished and flown away, Teddy was tired enough to want to go to bed, but Fred had to bring in cock-robin so she would give him a squeeze and ask him if it wasn't the nicest Christmas he ever had. Of course he agreed, so Teddy went to sleep quite contented, resolving in her own mind to have a Christmas dinner for the birds every year.

LAURA MAY BURGESS.

JIM CROW.

As I was planting corn one day last spring, I noticed that crows in the vicinity were much disturbed about something which was in a tree in an adjoining field. I had observed when plowing earlier in the season that the crows took many of the worms, which they gathered from the freshly plowed ground, to this special tree. I concluded that this tree must contain a crow nest. It was my intention to visit this tree, but I was so busy with my farm work that I had not as yet taken time to do so. The tree was a lone cottonwood standing near the center of the field next to the one in which I was working. It was a tree of many years' growth and had attained a large size. There were no low limbs on it, so it would be hard to climb. These limbs had been cut away by the farmer who tended the ground. But when I heard those crows making so much noise and flying about the tree my curiosity got the better of my industry and I left my corn planter, hitched my horses to the fence and set out to see what the crows had found. Climbing the fence, I ran over towards the tree. When I reached its foot I saw a large male fox squirrel on one of the branches. The crows were flying at him. They actually pulled bunches of hair out of his tail; for

they had chased him around and around among the branches until he could run no farther. But he did not like the idea of losing the bushy hair on his tail, for all squirrels are proud of their tails, so he made one more attempt to get away from the crows, but he could not; he then tried to come down the tree to the ground, but when he nearly reached it, he saw me and back he went again.

I then looked over the tree and not very high up I saw a crow's nest. I climbed up to see it, but there was nothing in it. I came down again, and when I had nearly reached the ground I saw a young crow sitting on a lower limb. I climbed out and captured him and taking him down, placed him on the ground. He hopped about a little, but was easily caught again. I soon found another young crow, which had hidden himself in the brush near the foot of the tree. He also was easily caught. Asking permission of the farmer, I took one of the young crows home with me. I showed it to Polly, my parrot, and she said it was "a white chicken," but later concluded it was "a pretty chicken," but Polly is the birdie. I call my pet crow Jim, and now he and Polly are good friends.

PAUL J. CAMPBELL.

THE BLIND.

Some look at Nature's face and lightly say—

"In this what talked-of beauty can there be?"

They look, but in their sordid, selfish way,

They look, ah yes, they look, but do not see!

—JAC LOWELL.





FROM COL. CHI. ACAD. SCIENCES.

WHEATEAR.
(*Saxicola oenanthe*)
Life-size.

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THE WHEATEAR.

(*Saxicola oenanthe*.)

The Wheatear is a remarkable bird because of its extensive distribution. Abundant in both Europe and Asia, it migrates in winter to northern Africa and India. It is also quite common in Greenland, and is found in Labrador. From there it straggles southward to Nova Scotia, and along the Atlantic coast as far as the Bermudas. On the western coast of America it is only found in Alaska. Here its visits are seasonal, and in its migrations it must fly across Bering's Strait and southward through Asia, as it has never been observed in British Columbia, or southward along the Pacific coast. The range of this bird extends nearly around the world, and from far within the Arctic circle to the torrid climes of the equator.

A few of these birds seem to winter in the British Islands, but the majority, having passed the season of severe weather in more southern regions, return to the coast of England early in the spring. They soon leave the rocky shores and fly to the downs and fallow lands. When crossing the water, the Wheatears, in an apparently exhausted condition, often alight upon vessels.

The Wheatear is an active bird, always alert, and is usually in motion. On the ground, and it is decidedly a terrestrial species, it hops rapidly, constantly jerking its tail. When disturbed, it utters a cry like "the syllables peep, chack, chack." For this reason and on account of its predilection for stony places, it is named in most parts of Scotland the "Stanchack." Because of the white plumage on the rump of the Wheatear it is often called White-rump or White-rumped Stonechat. It is a shy bird, and its favorite resorts are lonely meadows and fallow-lands and other localities little frequented by disturbing creatures. In such places it can easily retreat to the friendly cover of a clod of earth or a stone pile when danger is near.

The male Wheatear has a sweet and lively song, and it is said to be quite successful in its efforts to imitate the notes of other birds. Seebohm says: "The love notes form a short but pleasing song, and the more particularly are we apt to view his performance with favor, because it generally greets the ear in wild and lonely places. * * * Sometimes he warbles his notes on his perch, accompanying them with graceful motion of the wings, and finally launching into the air to complete his song, the aerial fluttering seeming to give the performance additional vigor." It is said that the Wheatear in confinement will sing continually and far into the night.

The nests of the Wheatear are usually placed in wild localities, and are well protected by their natural surroundings. The deep recesses of sea coast rocks and the crevices of old stone walls are favorite nesting sites. Not infrequently its home is built in the loose piles of stones found in abandoned gravel pits. Yarrell writes of one Wheatear that had nested in a bank behind a pile of stones. To reach this spot the bird passed through the "interstices of some rather large, loose stones, as a mouse would have done, and then laterally to a hollow space in a bank, against which the stones were laid; and so deep had she penetrated that many stones had to be removed before we could discover her treasures." But the Wheatear does not always show as much caution in the selection of a nesting site. Sometimes it chooses a deserted rabbit burrow or a space underneath a clod of earth in a fallow-field. The nest is usually constructed with the stems of plants and grasses, and is well lined with feathers and hair.

The Wheatear feeds on worms, small mollusks and insects. Flies are often caught while on the wing, the bird launching forth from its perch on a clod or stone pile and returning after the capture, as do the flycatchers.

Late in the season, when the Wheatear is plump and fat, it is esteemed as an article of food. In former years large numbers of these birds were captured for this purpose. Pennant states that in his time nearly two thousand dozens were annually captured by the shepherds on the downs in the vicinity of Eastborne.

Though the Wheatear is a shy bird, both the male and the female exhibit a great deal of anxiety, and bravely endeavor to defend their nest on the approach of danger. The male is very watchful during the nesting season, and it is said that he performs a part of the duties of incubation.

SOME QUEER TROPICAL INSECTS.

Venezuela presents an almost inexhaustible field for the favorite pursuits of the naturalist and entomologist, where organic life is so exuberant and where there is something to claim his undivided attention at every hour, and at every step.

This is especially true of the vast family of lepidopterous insects and particularly the butterflies, those Nature's fairies, which Spenser has described as "lords of all the works of Nature." In the course of our tropical travels we noticed one variety of even gorgeous coloring, which had the faculty of the chameleon of changing its gaudy colors in an instant to a dull and somber brown. This was done when it was being chased by its enemies. It would swiftly dart around and alight upon the opposite side of a tree, often assuming the exact color of the bark as it did so. Nature has provided it with means of defense to escape its many pursuers. The beautiful peacock butterfly, as well as the regal-robed Emperor butterfly, are among the grandest forms of the Creator's handiwork. They are also noted for the long aerial combats between the males during the season of mating. At such times they will fight as they circle upwards, and in their excitement will soar out of sight.

Like the butterflies, the beetles of this country are innumerable, being always marked by their crustaceous wing cases and an inordinate voracious appetite. One of the most curious and interesting creatures of all the multifold species of the

beetles found in the tropics is the bombardier, which is marked with beautiful metallic green and pitch black colors. It derives its name from a quaint volatile fluid, which it secretes and expels at will whenever alarmed or chased by its enemies. At such times it awaits the proper opportunity till its pursuer is close upon it, feeling certain of the prey, when it discharges a small quantity of the fluid into the enemy's face, which volatilizes and explodes with a miniature report. It is somewhat ludicrous to observe the consternation and confusion of the pursuer when thus surprised by such unexpected artillery. It always enables the bombardier to escape and reach its burrow before the enemy can clear its eyes and recover from the explosion that had frustrated its designs.

Though this curious beetle is very active in movement as well as swift on the wing, it rarely leaves the earth, where it is a rapid runner and easily captures its own prey, which are generally caterpillars and other tree-destroying insects. The males sometimes engage in mortal combats, and then, like the carabus, the victor will devour the vanquished.

The stag beetle, like the hercules and rhinoceros of the same tribe, is a most formidable looking creature, with toothed jaws extending beyond the head, like the horns of a stag. The males are inveterate pugilists, and we frequently observed a miniature ghastly sight of a group of their heads firmly locked in each other's mandibles, while the abdomens and trunks had disappeared. The carabus, or cannibal

beetle, usually devours the whole group when he finds them locked in this helpless condition. The wolf beetle is the king of the species and is naturally a terror to all others. About his burrow you can observe the remains of his cannibal feasts in pieces of wings, legs and other parts he has rejected. They have such strength in their jaws that they retain the power of biting after the head has been severed from the body.

Though possibly not to be classed among insects, the alacran is one of the queer organisms of the tropics. This venomous creature, as Scorpio, has been immortalized in astronomy as the eighth sign of the Zodiac to represent one of the constellations. It has a long body, terminating in a slender tail, with an acute sting which secretes a venomous liquid. The sting of this repulsive creature is very painful and will sometimes cause the loss of speech, if not a torpor of the tongue for fifteen or twenty hours. When it makes an attack it curls the tail over the head and back, biting and stinging at the same time. One curious effect of the sting of the alacran is observed when it attacks the leg of a man, causing the victim to stammer and gurgles for speech, as if he had been suddenly stricken with apoplexy.

There are several species of these poisonous creatures, but the largest and most vicious stinger is one about four inches long and having a dark-green body, with a well-marked stripe leading from head to tail. It is a significant and curious fact that this is one of the few creatures that will not brook captivity. After finding all means of escape impossible, they have been known to deliberately suicide by repeatedly probing themselves with their own venom.

The chigoe or "jigger" is a quaint infinitesimal insect, of a very troublesome character, which is found all the way from Mexico to Paraguay. It has no identity with the red bug, but is a tiny penetrating flea, which is so small as to be almost imperceptible. It usually attacks the feet of man and burrows under the great toe, where it deposits a minute sack of eggs. This causes no other

sensation than a slight itching at first, but in time it becomes dangerous, as, when the nits are hatched, they produce ulcers and running sores. Many evil results—even to the necessary amputation of the limb—have occurred to tropical natives, who neglect the precaution of extracting the egg sack as soon as there is a suspicion of its existence under the nail.

It has been clearly ascertained that many insects secrete equally as powerful poison as the deadliest viper, but their size and minute structure of organs prevents the bite or sting from being attended with the same dangerous or fatal results. There is a certain little arachnidian, however, called the casambulga, which would seem to be an exception. This is a small spider, with a globular black body, about three-fourths of an inch in circumference, beautifully marked with blood red spots. The poison it injects, with its bite, is possibly the most powerful of all the spiders, not excepting the tarantula. When first bitten the victim experiences no pain, but within two or three minutes there ensues excruciating agony, which extends throughout the body. Unless antidotes are immediately available the limbs will become numb, circulation paralyzed and the patient will fall into violent spasms.

There are many curious traits connected with the life and habits of the tarantula, centipede, zancudos, cucuyos, blister beetles, gnats and numerous parasites. The varied species of ants also furnish an inexhaustible mine of interest. The termites, or white ants, are actually a hindrance to civilization, as they ruthlessly devour the most precious papers and documents, often destroying whole libraries. Much of the important data and early history of Spanish America has been thus forever destroyed. The warrior ants (*Formica sanguinea*) are regular slave drivers and exercise great tyranny over many of the weaker species. The vachaco is a large ant, which is often eaten by the natives, who seem to relish the white part of the abdomen. They pinch off this part, mix it with cassava, and preserve it by drying in the sun.

ANDREW JAMES MILLER.

THE HABITS OF THE WILSON'S PHALAROPE.

(*Phalaropus tricolor.*)

The family Phalaropodidæ has a very restricted membership, comprising only three species, two of which are found principally along the sea coasts of the Northern Hemisphere. Wilson's Phalarope, unlike its relatives, is distinctly an American bird. Its range is chiefly inland, extending from the Mississippi Valley and Great Lake Region westward and north into the British provinces.

Few persons aside from those who are closely in touch with Nature can claim even a passing acquaintance with this beautiful creature, the Phalarope. Its soft, delicate plumage consists of various shades of chestnut, black, gray and white, giving an elegant and symmetrical appearance to the bird, which is equaled only by its graceful and gentle demeanor. Fortunate is he who can survive an attack from mosquitoes and venture among the mossy bogs and quagmires to study the Phalaropes in their native haunts. After such a visit one can scarcely refrain from admiring their unsuspicious and peaceful conduct. Well do I remember my initial experience with this little shore bird. It is only one of the many anecdotes which are jotted down in the note book of the field ornithologist, but it formed a vivid impression upon my mind. In company with a friend I was traversing a prairie marsh, near Chicago, where bobolinks and meadow larks abounded. Our destination was a dense copse, resorted to annually by warblers and flycatchers during the breeding season. We were admiring the aerial performance of a marsh hawk, when we were greeted on either side by a male Phalarope and a pair of Bartram's sandpipers.

Both species were entirely new to us in the wild state, and so complete was this surprise that we were unable to ac-

count for their sudden and unexpected appearance. The sandpipers hovered about on quivering wings, continually uttering their long drawn out plaintive yet melodious whistle.

The Phalarope displayed no less an amount of uneasiness as he darted back and forth in an undulating manner. His voice was a feeble "onk, onk," and lacked the distinctness of the Bartram's clear whistle, which was audible at the distance of half a mile. It was about the middle of June, rather a late date for finding eggs of either Phalarope or sandpiper, and after an extensive search we abandoned the place, baffled in our attempts to discover either nest or young.

Several years later, while in North Dakota, I formed a more extensive acquaintance with Wilson's Phalarope, and had the pleasure of meeting not only the male, but his better half. Contrary to the laws of Nature in general regarding other families of the feathered congregation, the Phalaropes possess peculiar characteristics decidedly their own. The female is superior in size and more brilliantly colored than her mate. She also shirks the domestic tasks so far as her sex permits, and the household responsibilities are assumed by the male. Mrs. Phalarope does the courting, displaying her plumage to the best advantage before the shy and indifferent male, who flies from pond to pond. She follows persistently and endeavors by a series of bows and gesticulations to win his favor. The male hollows out a small place in a mossy bog or damp meadow, sufficient to hold four eggs, which are ashy yellow in color and densely marked and streaked with rich brown and black. The eggs average one and twenty-eight-hundredths inches in length by ninety-four-hundredths of an inch in width, and are usually very pointed. Some nests are



scantly lined with grass blades or stems, but, judging from their usual appearance and the exposed situation in which the eggs are often found, I doubt if the male exerts himself when constructing their domicile. Nevertheless he sits patiently upon the eggs until three weeks have elapsed, when the young leave the shell to follow their father about in search of food.

The little fellows are chestnut-brown, streaked with a darker shade.

In the meantime the females have congregated in small groups and may be seen running about the water margin or

swimming buoyantly upon the tranquil surface of pond or lagoon. These birds excel other waders in swimming, because their toes are scalloped, or semipalmated, and well adapted for such purposes,

Twenty years ago Illinois was a favorite summer home for the Wilson's Phalarope, but they are becoming scarce, and from what I can learn, the bird is now regarded as a rare breeder east of the Mississippi River, except perhaps in Wisconsin, where they still gather during June to rear their young around the borders of isolated lakes.

GERARD ALAN ABBOTT.

JACK FROST.

Jack Frost is a sly old fellow.

He always comes in the night
And spreads o'er the landscape and windows
A covering of sparkling white.

An artist is he, so they tell me,
Most wonderful patterns he's wrought
On the grass blades, the sidewalks, the fences,
With a brush he from fairyland brought.

He's an expert, too, I can tell you,
No laggard is he, let me say,
When the sun goes down and the darkness
Steals quietly over the way
He comes, and when no one can see him,
The desolate country about
He changes, as if by magic,
Not a bramble or weed leaves out.

And the day, when it dawns in its splendor,
Looks down on a crystalized land,
While the sun peeping o'er the horizon
Winks at the Frost King's plan,
For he knows if he smiles on the landscape,
As he speeds on his course through the day,
All this beautiful work done in darkness
Will vanish quickly away.

—ADDIE E. BURR.

HOW WE SAW THE BIRDS.

II.

“Man’s reach must exceed man’s grasp,
Else what’s heaven for?”

v.

The last day of May the weather was somewhat more propitious for bird lovers than was May 1. “King-bird day” it was called, owing to the number of those autocratic friends who were seen. To the children it was the day of the strawberry party. They had found wild berries which they picked in glee and which they afterward ate sitting at a park table. The table was laid in green and red, leaves serving both as cloth and as plates, while the decorations were red clovers. Bread and butter sandwiches had been brought from home, hence the feast was all one could desire. After the manner of such functions, it occupied so much time that little was left for studious pursuits. However, upon this day a nest was discovered which for weeks after was the center of interest.

The nest was a delicate little cup, suspended from a small branch of an elm, about twelve feet from the ground, easily visible from the ground; but otherwise concealed by the foliage, which grew denser every day.

The owners of the nest were two trim little birds, olive gray above, cream below, no distinct markings save a black arched line over the eyes. The bills were good length and slightly hooked, and served the birds for obtaining food from the under-side of twigs. The song was clear and loud, not to say shrill—indeed, the voice seemed too big for the bird. All this was not discovered in one visit, but in several.

Upon June 2 the nest contained one white egg, which was discovered by climbing into a neighboring maple tree. Upon June 5 there were three eggs,

which were sat upon at intervals. The instant the female left the nest she was joined by the male—as if they met by prearrangement, as perhaps they did. When they met they flitted round and round each other in merry greeting. The two birds did not hesitate to take low and conspicuous perches, notwithstanding which they were not certainly identified. They were vireos doubtless; but what kind? Their song and plumage proclaimed them to be “preachers” or red-eyed vireos; but where were the red eyes?

Fortunately they were not greatly disturbed at the noise of the children, though some lively games were played with sticks just beneath their nest. One day a dead robin was found on the ground close by and the children moralized for an hour about “the poor robin whose mamma didn’t take care of it.” This view of the situation was as surprising to the children’s mother as it was uncomplimentary, for she had upon a previous occasion made a point altogether different from theirs, telling them that when a dead bird was found it had met death in disobedience, persisting in flying when its parents said it was not strong enough to leave its nest.

June 5 was succeeded by many days of rainy weather, but upon June 12 the bird students undertook a journey to see how their vireos were faring. Being overtaken by a heavy rain the family had to stop under a bridge. The father, however, stole a visit to the pendant nest and brought the comforting news that in spite of floods, nest, eggs and birds were still there.

On June 16, when the observers took their stand, they found the female bird

upon the nest. She remained fifteen minutes and then left the little home for just three minutes. Her companion went thither, standing upon the edge of the nest. For an instant it seemed that he was about to get into the nest, but he did not. This was the first time he had been seen even to touch it, and this was but for a moment. After his mate returned he took her food. He did not sing. Once he drove another bird from the tree. Here were four unusual conditions. What did they signify?

A baby, of course! When the student climbed to get a peep into the home that day the nest was suddenly converted into one great yawning mouth, which so startled him that he almost fell from the tree.

By this time the bird students had four sets of infants to look out for besides their own.

It was not until the tenth visit to the vireo nest that the identity of the bird became settled. On that occasion the observer climbed the tree when the parents were close to the nest. Their alarm was very great. They uttered cries not before heard and came so close to the invader that the red in their eyes was plainly visible. It was quite a relief to the students, who had always believed the ruby color to exist.

The ground beneath that little home became familiar and beloved to the children, who made a garden there, plowing it with sticks and planting with pebbles. As to the red-eyed vireo, they say they have never seen one, but they claim ownership in the nest which on July 1 was carried home attached to the forked branch from which it swung. The little twigs are not more than half the size of an ordinary lead pencil. The nest contained two unhatched eggs; white, thickly spotted with brown.

The children are wondering why the birds did not make little birds out of those eggs. Not being familiar with the laws of society, they are inquiring also why mother cannot climb a tree.

VI.

When in the spring the two enthusiastic bird lovers were watching the movements of a pair of wood-thrushes, they

longed to hear the song of those sweet-mannered birds, feeling that the music from such throats would crown their summer with delight. Before the coming of August, that month of "universal brooding stillness," the longed-for strain—"the golden trillide-de"—had become familiar. It was music of the diviner kind. How often the notes fell upon the ear! But the hearers ceased to be content. They had had a taste of glory and they began to look forward to the vespers of the veery and the holy chants of the hermit thrush—that little angel of the swamp.

There was one outing a happy day in July, when the family spent a day in a country place upon the shores of Lake Erie. At that time they experienced a great disappointment and a great pleasure. A real woods was there, a sort of forest primeval with the wild buffalo and wolves left out. The underbrush and vines were so thick and the hillside so treacherous that when the family started out for an afternoon ramble they had an afternoon scramble instead. The children could not make their way at all and had to be carried. But the birds were there, and, careless of consequences, were alluring the travelers on and on down the slope which they must needs climb again, babies and all.

Catbirds, wood thrushes, vireos, peewees, yellow warblers, rose-breasted grosbeaks, brown thrashers and song sparrows were all there; grouped together now, instead of being separated by miles and days. Here was a catbird's nest with its matchless green eggs, from the branches above swung a vireo's cradle, and there in a bush was a beautiful nest of the warbler type, having in it the egg of a cowbird. Close by flitted and talked two redstarts, male and female, one in a charming suit of black and salmon and the other equally attractive in brown and yellow. (Not a red feather anywhere to excuse the stupidity of calling them red tails.)

Just beneath the redstarts a tawny thrush-like bird was darting in and out of a raspberry bush. The hearts of the beholders stood still! Could it be a veery? They watched breathless, then crept closer to see the nest, which they found about a foot from the ground. It

held three young birds gaping wildly for food.

"We will retreat and watch awhile," said the students, though their burdens were becoming heavy and the mosquitoes had attacked them so fiercely that at every forward step they had said, "We must go back." The little enemies could not be called "no-see-ums"—the name the Indians gave them, for they were giants in size and as bloodthirsty as Bluebeard.

"We must go back," was said again, regretfully, yet each parent lingered, not possessed with the power of decisive action. Suddenly, however, the necessary impetus was given—a serpent hissed at their feet and hesitation ended in headlong haste homeward.

At dusk the bird-lovers, thinking of the evening song of the veery which their ears had never heard, again walked toward the wood; but they yielded to their better judgment and paused upon its border, where they stood for an instant listening to wandering voices and to one

especially whose luring was all but irresistible.

Later in the summer a hasty visit was made and the nest in the raspberry bush was carried away and examined, only to confirm the faith of its possessors that it had been the home of the Wilson thrush or veery, whose valuable acquaintance they had failed to make.

The warblers' nest, which had evidently been abandoned by its builders because of the stray egg, was also taken home. The children insisted upon calling it a cowbird's nest and when the sad character of the cowbird was presented to them they were not morally affected at all, as they were expected to be. The younger child insisted that the cowbird did not know any better—"he got mixed." The little girl hinted that Madam Cowbird was a society lady and she seemed to justify her in wanting somebody else to take care of her children. "Besides," she added in conclusion, "maybe cowbirds really do not know how to take care of babies."

MRS. CHARLES NORMAN.

WHO WOULD HAVE LIFE ALWAYS MAY?

Sweet winds, sunshine, music, flowers—

Ah, could life be one long May,

What a happy world were ours!

But as darkness follows day,

So the gloomy winter lowers

O'er the sunny summer hours.

Yet would summer seem as fair

If the earth were never bare?

And when watching Autumn's death

Quickened under vernal breath,

Does not, then, stern "dust to dust"

Lose itself in sacred trust?

After all, 'tis best God's way,—

Who would have life always May!

—STANFORD CONANT.





SPECIMEN LOANED BY RUDOLF HAWAN.

COMMON GAR PIKE.
(*Lepisosteus osseus*).
 $\frac{1}{3}$ Life-size.

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THE COMMON GAR PIKE.

(*Lepisosteus osseus*.)

Though nothing that has been created is without some value in the economy of Nature, the fisherman to the manor born often exclaims, "The Gar Pike is a wholly useless fish! Better were the waters if this fish had never been created!" Many fishes have been protected by legislation, but it is seldom that fishes have been doomed to destruction by an act of a legislative body. This, however, happened to the Gar Pikes that formerly lived in the waters of Lake Chautauqua. "In 1896 and 1897, at the request of the Farmers' and Citizens' Game and Fish Protective Association of Chautauqua County, New York, two special appropriations of one thousand dollars and five hundred dollars, respectively, were made by the legislature for the destruction of the Gar Pike or Bill-fish, which were believed to be destroying the young bass and muskallunge in Lake Chautauqua. In 1896 netting for these fish was begun, and was continued in May and on into July, 1897. In 1896 there were caught and killed two thousand six hundred and six Bill-fish. The next year one thousand three hundred and sixteen were killed." It would seem that the Gar Pikes are easily exterminated, for since that time but few of them have been taken from the lake.

The fish that we illustrate is the common Gar Pike of the lakes and rivers of the United States, and is quite abundant, especially in certain districts, from the New England States to Mexico. It is a variable species, and is known by a number of local popular names; it is quite generally called the Long-nosed Gar or the Bill-fish. So variable is this fish that it has been named by a number of authorities who believed the specimens which they studied were representatives of a new species. This has given rise to

a multiplicity of Latin names, which are now considered synonyms of the one given at the beginning of this article.

All the Gar Pikes, of which there are five species, belong to the genus *Lepisosteus*, a name derived from two Greek words meaning bony scales. Four of the species are found only in the waters of North America. The fifth species is found in China. All live only in fresh water; have very sluggish habits, and are extremely voracious and destructive to smaller fishes. The flesh of all Gar Pikes is tough and rank. Though it is usually thrown away as worthless, it is said that some negroes of the South prefer its flesh as a food to that of the catfish. The Gar Pikes are of great interest to the geologist, for they are among the few living representatives of prolific orders of geologic ages.

Prof. Alexander Agassiz, who made a careful study of the life history of the Gar Pike, has given an interesting account of the characteristics of its eggs and of the young fish. He says: "The eggs are large, viscous, stick fast in an isolated way to whatever they fall upon, and look much like those of toads, having a large outer membrane and a small yolk."

"The young Gar Pike moves very slowly, and seems to float quietly, save an exceedingly rapid vibration of the pectorals and the tip of the tail. They do not swim about much, but attach themselves to fixed objects by an extraordinary horse-shoe-shaped ring of sucker-appendages about the mouth. These appendages remain even after the snout has become so extended that the ultimate shape is hinted at; and, furthermore, it is a remnant of this feature which forms the fleshy bulb at the end of the snout in the adult."

Champlain, while visiting in 1609 the lake that bears his name, wrote of a large

fish that he observed, which from his description was undoubtedly a Gar Pike. He says: "Among the rest there is one called by the Indians of the country Chaousaron, of divers lengths. The largest, I was informed by the people, are eight to ten feet. I saw one of five as thick as a thigh, with a head as big as two fists, with jaws two and one-half feet long, and a double set of very sharp and dangerous teeth. The form of the body resembles that of the pike, and it is armed with scales that the thrust of a poniard cannot pierce, and it is of a silver-gray color. The point of the snout is like that of a hog. This fish makes war

on all others in the lakes and rivers, and possesses, as these people assure me, a wonderful instinct, which is, that if it wants to catch any birds it goes among the rushes or reeds bordering the lake in many places, keeping the beak out of the water without budging, so that when the birds perch on the beak, imagining it the limb of a tree, it is so subtle that closing the jaws, which it keeps half open, it draws the birds under water by the feet. The Indians gave me a head of it, which they prize highly, saying that when they have a headache they let blood with the teeth of this fish at the seat of pain, which immediately goes away."

SETH MINDWELL.

THE CHAMELEON OF OUR SOUTHERN STATES.

In the first place he is not a Chameleon at all—this little native of the south whom we sometimes see hawked about our northern streets by novelty-venders in the wake of circus parades—who has even been doomed to slavery and fastened by gold manacles to the silken gowns of novelty-seeking women, but who at home among his own green vines and brooding sunshine is a fitting and attractive accompaniment of southern life.

For the true Chameleon we must go much farther, to Africa or Madagascar, or in the case of one species to some parts of Europe or India. We should find him a curiously constructed creature, with a prehensile tail, with toes specially fitted for grasping twigs of trees, with a stumpy horny head almost immovable, but with curious tongue and eyes which make up in intelligence and power of motion—the eyes seemingly able to reach in any direction, and the tongue a long club-shaped arrangement which can shoot itself out for several inches and gather insects on its swollen sticky end.

It is, of course, the chameleon-like power of changing the color of his skin which has given this name to our lizard acquaintance, and as names once given are not easily gotten rid of, it would perhaps not be a bad idea to put him down permanently as the Chameleon-lizard. For he is really a lizard, one of the smallest of the nearly two thousand species known, and in the books he answers to the name *Anolis*. In real life, unfortunately, he cannot answer to any name, nor even to sentiments of any sort, however invitingly expressed, as he is utterly and absolutely without a voice. Still, he has compensations even for this lack.

Judging from our Chameleon's sluggish blood, from the way he has of taking long sun baths on some particular spot of vine or fence, from his finding his way into the house when cold weather comes and spending the winter hidden away in dark corners or perched high up on some window screen or lace curtain, one can imagine him to be a sort of domestic animal, having his home and keeping it, in a cer-

tain locality and attached to both the place and its people.

At least I am ready to believe that the Chameleons of a certain southern garden that I wot of called Hollywood, are quite content and do not care to wander from its luxuriance of vines, its delightful hiding places, and its glorious sunshine, living there from year to year, and when the roses have stopped blooming, creeping inside in the hope of warming their cold bones by the roaring blaze of a "fat-pine" log in the great fireplace.

The proverbial domesticity of the Chameleon-lizard is, however, deceptive. He is a contradictory sort of creature. Like some persons, apparently frank and confiding in the extreme, one finds one can go just so far into his confidence and no whit farther. Instinct sends him to the warm corners; but after you have for weeks warmed and fed him, even while lying gratefully asleep in your warm hand, at some sudden motion he will turn his snaky head and eye you as suspiciously as when he first crept in out of the chilly air and hid himself among the curtains.

Still he is not wholly unappreciative, and he has attractions as well as antipathies toward the human kind. I count myself favored, in that, during a somewhat close acquaintance with a certain individual of his kind, I was only once or twice given an exhibition of his red flag of wrath, while on the too near approach of some others the red sac under his throat would immediately appear. I wonder if there was some subtle realization of their feeling of repugnance toward him. This red sac seems to be among the males a sign of irritability. I have seen two chasing each other up and down tree trunks and throwing out their red sac in a most excited and angry fashion. It is probably, too, a device for attracting the females.

The strange power of changing the color of the skin has brought forth all sorts of theories to account for it. It

seems reasonable to believe that there are "two differently colored layers of pigment cells in the skin, so arranged as to move upon each other and produce different effects of color." Also, that the great lung power has something to do with the process. But what is the cause governing this movement, and producing such different effects at different times? It has no connection with the color of the object on which the animal happens to rest, excepting that his color changes are limited to greens and browns, which are the colors of leaves and twigs on which he is oftenest found.

So far as my observation goes, I believe this wonderful power of color change to have been given him as a mode of expression of his emotions and sensations—a sort of compensation for his inability to make a sound. Take him when he is having a fit of the sulks, when his plans have been interfered with or his tail pulled by too inquisitive children, or when he is cold and discontented. Then he is a repulsive looking object with his chocolate-brown coat and an evil look in his eye. Hold him quietly in your warm hand. He will close his eyes, or at least one of them, in contentment, the brown will gradually grow lighter, a green spot or two will appear, and if his confidence in you is firm enough he will after a little be quite green and happy and handsome.

The Chameleon-lizard is of course perfectly harmless, but for that matter so are most of the lizards. The small negro, or even the large one, will roll his eyes in fear at sight of almost any of them. But experts tell us that of all the species only two, and these natives of only our southwestern border states, Texas, New Mexico, Arizona, are poisonous, and that even of these the poisonous qualities are not conclusively proved. So that we need not stop with the Chameleon, but may by a little search find profitable acquaintances among other members of this somewhat unpopular family.

KATHERINE C. PENFIELD.

THE PEAR.

The Pear, like the apple and many other forms of fruit, is an inheritance from remote times and crude beginnings. In a special degree, it is a triumph of the horticulturist's skill. The thorns which covered the trees that originally flourished in Syria, in Egypt and in Greece, have long since disappeared, and the one-time acrid fruit has become metamorphosed into the luscious forms which under many varietal names holds the place of the favorite fruit of modern times.

The Pear was considerably cultivated during the early periods of the Roman Empire, being transplanted into Italy from Greece. Theophrastus writes of the productiveness of old Pear trees and Virgil mentions Pears which he received from Cato. Even in those remote days the varieties under cultivation were numerous. Pliny speaks of many of these, especially of the Falernian Pear, which was especially esteemed for its juice; and the Tibernian, named after the Emperor Tiberius, with whom it was a favorite.

None of these old Roman varieties have come down to us. This is not to be regretted, however, in view of Pliny's remarks that "all pears whatsoever are but a heavy meat, unless they are well boiled or baked." In fact, the really delicious qualities of this fruit were not developed until about the seventeenth century. From among the eighty thousand seedlings raised by Professor Van Mons, who devoted his life to Pear culture, and the thousands of forms coming especially from Belgium, "the Eden of the Pear tree," there have been selected a large number which form the favorite varieties of the present day.

More than to any other source are we indebted to the French Huguenots for the introduction and cultivation of the Pear into this country. Many examples of this early cultivation may still be seen in the old trees in Long Island and New Ro-

chelle, in Michigan and Illinois. The introduction by these people of the French method of propagation upon the quince stock gave an immense impetus to the cultivation of the fruit, as by this process the period of fruiting was reduced from twenty to thirty years to three or four years.

The Pear, like the apple, peach, plum, cherry and many other forms, is referred to the Rosaceae or rose family. It belongs to the genus *Pyrus*, which also includes the apple, the crab apple, the mountain ash and the historical rowan tree. For the most part, the American forms have been derived from the European *Pyrus communis* and the oriental *Pyrus sinensis*. The trees differ in general aspects from the apple tree in possessing a more pyramidal form, in being considerably longer as a seedling plant, and while less hardy, being longer lived. It is propagated by seeds, cuttings, layers, budding and grafting, but its sensitiveness to climatic conditions has materially limited its distribution in the United States. Thus Pear culture has always been precarious in the great interior basin, while the heat of the southern States and the severe winters of the northern prairie areas are unfitted to bring about satisfactory development. The trees do not produce fruit on the wood of former years, but on spurs which grow out of wood less than a year old. On the points of these, buds are formed and flowers are produced, and while many of these fall, such as remain are thus enabled to develop larger fruit.

As a rule, Pear trees are not to any great extent subject to fungus blights. The most common of these is probably the *Roestelia cancellata*, which causes the leaves to become covered with large raised spots, at first yellow, but soon turning red. Cracking in Pears may be due to several causes, the most common being a fungus on the leaves and twigs



PEARS.
(*Pyrus communis*).
Life-size

which prevents the fruit setting, or if they do set, they are crippled and injured in growth and crack as they ripen. The most serious, however, is the fire blight, which occurs during moist seasons. This is a distinctively American disease, and is caused by microbes which enter the growing points and gradually work down the stem, killing the tissues and causing the leaves to die.

Of the more than seven hundred varieties of Pear trees, some attain to a large size and become hoary with age. A tree in the village of Garmouth, New Brunswick, is over one hundred and fifty years old. Its trunk measures twelve feet in circumference and reaches to a height of forty feet. In one year it produced twenty-eight thousand six hundred Pears. Another tree on the turnpike, between Worcester and Tenbury, England, has a trunk fourteen feet in circumference and fifty-six feet in height. There are Pear trees in France which are said to be more than four hundred years old, and a specimen in the parish of Holm-Lacey, Herefordshire, has yielded fifteen hogsheds of perry or pear cider in one year. Advanced age produces a strong, compact wood, which is much used in making tools, statuary and some kinds of cabinet work. It takes an excellent ebony finish.

It would be strange if trees of such value and age had not been made the subject of myth and story, and while the Pear cannot compete with the apple as a myth producer, yet it has done well when we consider the herpetological record of its sister, the apple, which started in by making trouble for our first parents.

In the first place, the Pear is a fruit of good omen, while the plum and cherry are harbingers of misfortune. To dream of a ripe Pear insures the speedy attainment of great riches, and it was doubtless for either or both of these reasons that

the Roman bride partook of the fruit. Pliny does not state whether or not this bridal Pear was boiled or roasted.

The northern mythology describes a Pear, whose odor caused the writing of inspired verse, while Iduna jealously guarded certain Pears which, by a touch, restored to the aged gods the full vigor of youth.

It is stated on the excellent authority of a mediaeval English writer that in certain parts of Greece there grew "trees which bore small Pears of a white color which contain little living creatures; which shells in time of maturity do open, and out of these do grow those little living things which, falling into the water, do become fowls, which we call barnacles."

Pear cider, commonly known as perry, when too freely imbibed, becomes an intoxicant. This was evidenced during the ninth year of the Peloponnesian war. It appears that the Priestess Chrysis partook of the pear juice for so long a season that she placed torches in too close proximity to the garlands adorning the temple of Juno at Argus, and so reduced the sacred structure to ashes. A series of thirteen paintings in the National Club at Perth illustrates the Hungarian myth of the seasons. Illona, Queen of Summer, is held in thrall by the Queen of Winter. Illona plants a Pear tree—to her a symbol of freedom—in the territory of Argeles, the Earth King, and commits its keeping to the King of the Sun. Winter at once sets a guard around the tree, but the genius of the winds wafts poppy seeds over the eyes of the watchers, and while they sleep the golden fruit is borne away in a swan chariot. The paintings represent the victory of the Sun god, the union of Illona and Argeles, summer and earth and the coming of the harvest of the fruits.

CHARLES S. RADDIN.

A FEW FACTS ABOUT COFFEE.

The average size of a coffee plantation, in Java, is from four hundred to five hundred acres.

A coffee tree begins to bear about the third year. At the fifth it reaches maturity, and continues in its prime for ten or fifteen years. In its wild state, the tree is very tall, but under cultivation, it is not allowed to grow above ten feet. It is also made to assume a pyramidal form—with horizontal branches growing quite to the ground.

Its leaves are oblong, leathery, and evergreen. Its flowers, small, clustered in the axils of the leaf and snow white.

The berries, in shape, resemble an acorn with its cup taken off. In color, they are reddish brown. They are harvested, ordinarily, at the beginning of the dry monsoon, about April or May.

After being gathered the berries are put in the pulping machine and the husk, or outer covering, removed. The coffee is now said to be in parchment; that is, the two lobes of the bean are still covered by a parchment-like skin. In this condition it is washed down in fermenting banks, where it remains for thirty-six hours. After a final washing it is dried in the sun, in large woden trays, running on wheels, or else on concrete platforms.

Most of the Java coffee is sent off to Europe while it is still in the husk, in order that it may present a better appearance in the European markets.

Coffee was not known to the Greeks and Romans, but in Abyssinia and Ethiopia, it has been used from time immemorial.

Towards the end of the seventeenth century it was carried from Mocha to Batavia by Wieser, a burgomaster of Amsterdam, where it was soon extensively planted, and at last, young plants were sent to the Botanical gardens at Amsterdam.

From this the Paris garden obtained a tree, and in 1720 the first tree was planted in Martinique, where it succeeded so well, that in a few years all the West Indies could be supplied with young trees.

The first coffee house was opened in London in 1652, by a Greek, named Pasquet. This Greek was the servant of an English merchant, named Edwards, who brought some coffee with him from Smyrna, and whose house, when the fact became known, was so thronged with friends and visitors who wished to taste the new beverage, that, to relieve himself from annoyance, Edwards established his servant in a coffee house.

In Arabia and the East coffee is not prepared as a beverage in the same way that it is in Europe. A decoction of the unroasted seeds is there generally drunk, and for the Sultan's coffee, the pericarp, with the dried pulp, is employed. The leaves of the coffee are used in the western part of Sumatra instead of the seeds.

They are prepared by quick drying, in a manner similar to that in which the tea leaves are prepared. In this state they contain more caffeine than the bean.

The average consumption of coffee in the United States, according to Mulhall, is two hundred and fifteen thousand tons.

LOUISE JAMISON.





GLISTENING COPRINUS.
(*Coprinus miceneus*).

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THE GLISTENING COPRINUS.

(*Coprinus micaceus*.)

Although bred only from the decay of higher organisms, these mushrooms are not without their own beauty of shape and color.—HUGH MACMILLAN.

While walking through the streets of a country town during the spring, summer or autumn months one is likely to see small mushrooms—toadstools, the country lad will call them—pushing their way upward through the crevices of the loosely laid flagstone or board sidewalk. More frequently they will be observed growing in dense masses by the wayside, usually near an old and decaying stump of a tree. In many instances these mushrooms will prove to be the Glistening Coprinus. From April to November, though more commonly in spring and autumn, they appear, and it is not an uncommon occurrence when a single stump will yield several crops in a season. Sometimes the group of mushrooms seems to grow directly from the earth and are apparently far from decaying wood. However, there is probably a piece of wood hidden beneath the surface of the ground upon which this dependent plant is being nourished.

The clusters of the Glistening Coprinus are frequently very large and contain a number of individual plants. Thus, though the plant itself is small, the whole cluster will furnish quite a harvest. In Europe this Mushroom is not included among the edible forms. Dr. Peck suggests that this may be due to its small size, but its abundance and the ease with which it may be procured compensate for its lack of size. By those who have eaten it repeatedly without harm it is considered a delicacy and not inferior to many other species. When raw it has a flavor of nuts.

The genus Coprinus, to which the mushroom of our illustration belongs, in-

cludes a number of species which are commonly called Ink Caps. All are easily identified, for soon after the spores have matured the plates that bear them are resolved into an inky fluid, especially in damp or wet weather. Their life histories are nearly completed while still beneath the surface of the ground. It is only when their spores are quite mature that they seek the air above the surface, pushing themselves out in the night time only to melt away in inky drops during the day. Sometimes when the weather is not damp all the parts may dry and the Mushroom remain well preserved.

It is only when young that the Glistening Coprinus should be gathered for food, and the specimens should be immediately cooked, for they are far from attractive when they have turned black. It is quite easy, even for a novice, to distinguish this Mushroom. All the Ink Caps have an "oblong or nearly cylindrical cap, which does not expand until ready to dissolve in inky drops." The cap of the species of our illustration when young is covered with glistening scales which appear like fine grains of mica, and is buff or tawny yellow in color. The cap is thin, and early in its life is ovate, but later it becomes bell-shaped.

Nina L. Marshall suggests that "Shelley must have had the Ink Caps in mind when he wrote of the fungi in the garden of 'The Sensitive Plant'":

Their mass rotted off them, flake by flake,
Till the thick stalk stuck like a murderer's
stake,
Where rags of loose flesh tremble on high,
Infecting the winds that wander by.

ELIZABETH WILLIS WOODWORTH.

THE MARY SPIDER.

(*Epeira gemma.*)

She was a fine large brown spider with three great brown spots on her back that looked like three huge eyes. She had her web just outside our kitchen window and the whole family took great pleasure in watching her movements and in finding out what she ate.

Her web was a beautiful piece of work almost a foot across, and evidently very well placed, for sometimes she would have as many as a dozen insects in it. Among these little creatures we saw moths, flies, gnats and beetles. No doubt Mary rejoiced in spider fashion to see so much good food all ready for the eating, but sometimes a bird would dart down, eat the captured insects, tear the web in a dozen places and only leave the mistress of the establishment because she was hidden away in a bit of thickly woven web just under the window ledge.

For days after such an attack Mary would have to be very industrious, working on her web in the late evening and we thought during the night, though hiding away during the day time. Even with ordinary luck there was a great deal of work for her in keeping the web mended and cleaned. "A spider has a hard working time," the little girl of the household decided.

It was the little girl who gave her the name of Mary, and soon every one called her the Mary spider.

In the fall she became sluggish and at last gave up housekeeping entirely,

and her web broke loose from its moorings and flapped about in the breezes and at last was blown away.

We watched Mary in her retreat under the window ledge and wondered how long it would be before she would fall a victim to the cold, but she still had an important piece of work to do, and one morning we found her very busy making a web in one corner of the window ledge; this web was very small and closely woven, and in it she placed a great number of small white eggs, and covered the whole with many layers of spiders' silk; then she went about picking up bits of sticks and all sorts of tiny trash, which she stuck on the outside of her nest. When finished the nest said as plainly as could be: "There is nothing here; this is only a trash pile." Mary disappeared soon after this.

On the first of May I noticed that the trash was moving, and a few days later tiny yellow things with the egg skins still attached began to drop through the bottom of the nest. Such a great number of them!

"Whatever shall we do with so many of Mary's children?" the little girl asked; "we'll never be able to tell which is which."

There must have been several thousand at first, and it is curious to think that by one accident or another only two or three will ever reach full size.

WILMATTE PORTER COCKRELL.

SOLITUDE.

There is a pleasure in the pathless woods;
There is a rapture on the lonely shore;
There is society, where none intrudes,
By the deep sea, and music in its roar;
I love not man the less, but Nature more.
From these our interviews, in which I steal
From all I may be, or have been before,
To mingle with the universe, and feel
What I can ne'er express, yet cannot all conceal.

—LORD BYRON.

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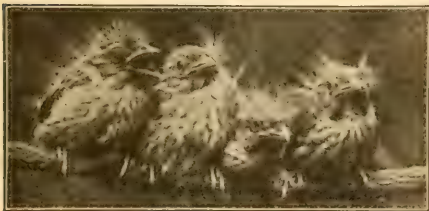
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Telegram—Send man at once.—*Col. Fowler, Jan. 2.*

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Telegram—Cattaraugus, assistant, science, mathematics, resigned. Send Decker to apply.—*To Principal J. S. Kingsley, Newark Valley, N. Y., Jan. 2.*

Telegram—Send Mr. Greep here at once to see board.—*G. E. Purple, clerk board of education, Newark Valley, N. Y., Jan. 2.*

Telegram—Could not reach Green. Have sent Robenolt for Decker's place. Good man.—*To Mr. Purple, Jan. 5.*

I arrived here last evening, met the board this morning at 8 o'clock, and was elected to the position. Begin work to-morrow morning. Thank you most heartily.—*Wm. M. Robenolt, Jan. 6.*

Allow me to thank you many times for securing a man to take my place. Any service I can render you will be gladly given.—*B. L. Jones, Jan. 6.*

The School Bulletin Agency, C. W. Bardeen, Syracuse, N. Y.



THE WARBLERS IN COLOR.

Bird-Lore begins in its December issue, the publication of a series of beautifully colored plates, by Bruce Horsfall, accurately representing all the plumages of North American Warblers.

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TO THE READER OF THIS MAGAZINE ☉ ☉ ☉
Fourteen volumes of BIRDS AND NATURE were completed with the Dec., 1903, number. These volumes contain illustrations of Birds, Birds' Eggs, Birds' Nests, Flowers, Mushrooms, Mammals, Fish, Insects, Fruits, Shells, Minerals and Gems; and the text contains several valuable articles from the pens of well-known writers and educators. We shall continue to have BIRDS made the chief attraction, and at least four bird-plates will appear in each number. Among the probable color illustrations of future numbers, the following may be mentioned:

JANUARY, 1904.

Ash-throated Flycatcher.
Golden Eagle.
Forster's Tern.
Lapland Longspur.
Nest of the American Goldfinch.
Watermelons.
Mushroom.
Grayling.

FEBRUARY, 1904.

House Finch.
American Goshawk.
Lesser Scaup Duck.
Nest of the Lesser Scaup Duck.
Grape Fruit.
Mushroom.
Kittiwake.
Cut-throat Trout.

The preparation of the birds and other animals for photographing in colors will be under the direction of Mr. Frank M. Woodruff, of The Chicago Academy of Sciences. Mr. Woodruff will also assist the Editor in the selection of subjects.

During the publication of the fourteen volumes of BIRDS AND NATURE the following 616 colored plates have appeared:

361 Birds.	7 Minerals and Ores (48 varieties).	5 Mushrooms.
70 Mammals.	17 Gems and Gem Minerals.	4 Corals.
40 Flowers.	9 Shells (96 species).	3 Birds' Eggs (49 Species).
28 Medicinal Plants.	8 Fishes.	2 Starfish and Sea Urchins.
18 Fruits & Nuts (28 species).	5 Reptiles (Turtles and Lizards, 6 species).	1 Polished Wood Sections (6 varieties.)
16 Insects (86 varieties).	10 Birds' Nests.	1 Showing Change of Color in Birds' Feathers.
11 Landscapes.		

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To my father and mother, Daniel Farrand Rogers and Ruth Llewellyn Rogers, pioneers of the treeless prairie, who planted seed and sapling, who toiled and hoped and waited to make for their children a home among green trees.

The contents are both entertaining and valuable for their facts. But quite as interesting as the text are the illustrations. These consist of full-page photogravures of entire trees, half-tones of the trunks, and text drawings in line. The trees are in full foliage, the individuals selected are leaders of their kind, and the photographer knew an artistic composition when he saw it. The result is that many of the photogravures are satisfactory from the artistic standpoint.—*The Chicago Inter Ocean*.

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Miss Rogers takes her readers into the woods in March, when the red maple begins to glow, and teaches one by one the life histories of the forest giants. There is nothing which has to do with the tree, from the top-most leaf to the last and tiniest rootlet in the dark ground, of which the author does not tell. The beautiful illustrations are of the greatest assistance in the understanding of the nature laws of which the writer tells. There is much beside mere description of tree life in this book of trees. Full and complete instructions for the cultivation of trees of all kinds are given. The enemies of the trees, fungus growth and insects, are considered at length, and the best means of combating them are explained to him who would undertake tree culture.

If the westerner who has never been East wishes to know why it is that the New Englander, transplanted to the prairies, sometimes expresses a yearning desire "to see a tree," let him look at the frontispiece of

"Among Green Trees." It shows an avenue of elms in the village of Deerfield, Mass. The trees are magnificent; no other word expresses it. This New England byway is perhaps more famous for its elms than is any other eastern village street except that famous one along whose leafy way lived Thoreau, Emerson and the Alcotts. "Among Green Trees" is a book not only for the arboriculturists and the nature lover, but for whoever appreciates that which is well done in literature and in picture making.—*The Chicago Tribune*.

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